# GOVERNMENT OF INDIA
# ATOMIC ENERGY
# LOK SABHA

UNSTARRED QUESTION NO:4130
ANSWERED ON:10.08.2016
Code of AERB for NPPS
Dhotre Shri Sanjay Shamrao;Mahtab Shri Bhartruhari;Shewale Shri Rahul Ramesh

**Will the Minister of ATOMIC ENERGY be pleased to state:**

(a) the criteria laid down in the code of Atomic Energy Regulatory Board (AERB) for setting up of Nuclear Power Plants (NPPs) in the country;

(b)whether the Government proposes to set up more nuclear power plants in the coastal areas of the country;

(c)if so, the details thereof along with the number of such plants operational in coastal areas of the country, State-wise;

(d) whether the nuclear plants operational in the country are utilising their optimum capacity in power generation; and

(e)if so, the details thereof, plant-wise and if not, the reasons therefor along with the share of nuclear power plants in the total power generation in the country?

## Answer

THE MINISTER OF STATE FOR, PERSONNEL, PUBLIC GRIEVANCES AND PENSIONS AND PRIME MINISTER''S OFFICE (DR. JITENDRA SINGH):

(a)Atomic Energy Regulatory Board (AERB) has specified the safety and security requirements for setting up of Nuclear Power Plants in its safety directives and codes. With respect to setting up of Nuclear Power Plant the applicable codes are; Code on Site Evaluation of Nuclear Facilities, Code on Design of Light Water Reactor based Nuclear Power Plants, Code on Design of Pressurized Heavy Water Reactor based Nuclear Power Plants, Code on Nuclear Power Plant Operation, Code on Quality Assurance in Nuclear Power Plants, Code on Radiation Protection for Nuclear Fuel Cycle Facilities and Code on Management of Radioactive Waste.
The broad technical criteria as laid down in the AERB code. Inter- alia include Seismicity & Location of faults, Geology, Foundation conditions, Meteorology, Potential of flooding (from tsunami, storm surge, etc. at coastal sites and from Rain, upstream dam break, etc. at inland sites), Proximity to airports, Military installations and Facilities storing explosives & toxic substances etc. In addition, availability of land, water, demand of electricity in the region, power evacuation and availability of other energy option also form the basis for evaluation of potential sites.

(b)Yes, Sir.

(c)The details of nuclear power plants in operation, under construction and planned in future at coastal sites are as follows:

---

State Location No of Reactors Capacity (MW)

Reactors in Operation

Maharashtra Tarapur 4 2 X 160 + 2 X 540
Tamil Nadu Kalpakkam 2 2 X 220
Kudankulam 1 1000

Reactors under Commissioning

Tamil Nadu Kudankulam 1* 1000*
Kalpakkam 1 500 **

Reactors under Construction

Tamil Nadu Kudankulam 2# 2 X 1000#

Sites Accorded In principle Approval

Maharashtra Jaitapur 6 6 X 1650

Andhra Pradesh Kovvada 6 6 X 1000@
Tamil Nadu Kudankulam 2 2 X 1000
Gujarat Chhaya Mithi Virdi 6 6 X 1000@
West Bengal Haripur 6 6 X 1000@
---
*KKNPP-2 attained first criticality on July 10, 2016
#Excavation is in progress in KKNPP 3&4
@ Nominal Capacity
** Prototype Fast Breeder Reactor (PFBR)

(d)Yes, Sir.

(e)Nuclear power plants are presently being operated at their rated capacity. The details of Plant Load Factors (April to June 2016) plant wise are enclosed as Annexure. The share of nuclear power in the total electricity generation in the year 2015-16 was about 3.4%.

*****

ANNEXURE
Nuclear Power Plant Location Capacity, MW Plant Load Factor,
% (April to June, 2016)
TAPS − 1 Tarapur, Maharashtra 160 86.59
TAPS − 2 160 0*
TAPS − 3 540 55.75$
TAPS − 4 540 99.31
RAPS − 2 Rawatbhata, Rajasthan 200 32.35$$
RAPS − 3 220 89.54
RAPS − 4 220 93.33
RAPS − 5 220 94.64
RAPS − 6 220 81.69
MAPS − 1 Kalpakkam, Tamil Nadu 220 79.61
MAPS − 2 220 79.73
NAPS − 1 Narora, Uttar Pradesh 220 90.39
NAPS − 2 220 74.99
KAPS − 1 Kakrapar, Gujarat 220 0**
KAPS − 2 220 0**
KGS − 1 Kaiga, Karnataka 220 63.39$
KGS − 2 220 89.20
KGS − 3 220 38.90$$
KGS − 4 220 98.27
KKNPP − 1 Kudankulam, Tamil Nadu 1000 98.44
---
* TAPS-2 is shutdown for refueling and Reactor Pressure Vessel inspection works. The unit
restarted its operation from 25.07.2016.
* *Under shutdown for inspection of coolant channels.
$ Biennial shutdown (BSD) was taken in this period as per the plan.
$$ Unit was under shutdown for BSD & maintenance activities.

*****